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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,503	01/28/2004	Masahiko Nakayama	R2184.0297/P297	2566
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DICKSTEIN SHAPIRO LLP 1825 EYE STREET NW Washington, DC 20006-5403			EXAMINER COLEMAN, VANESSA V	
			ART UNIT 2627	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/765,503	Applicant(s) NAKAYAMA ET AL.	
	Examiner Vanessa (Brandi) Coleman	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2007.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5-9 is/are rejected.
- 7) ☒ Claim(s) 3,4 and 10-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 May 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings were received on May 2, 2007. These drawings are acceptable.
2. Figures 1-8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Indicated Allowability Withdrawn***

3. The indicated allowability of claims 5, 7, 9 is withdrawn in view of the newly discovered reference(s) to Miyazaki et al., US Patent No. 6,850,472, in view of Satoh et al., US Patent No. 5,428,497. Rejections based on the newly cited reference(s) follow.

### ***Claim Objections***

4. Claim 14 is objected to because of the following informalities: Claim 14 appears to have been inadvertently excluded in the list of claims in the amendment dated May 2, 2007. Appropriate correction is required.

***Claim Objections - 37 CFR § 1.75 (a)***

1. Claims 1-5 and 19-12, objected to under 37 § CFR 1.75(a) for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 1, it is unclear how the two first light receiving areas of the beam splitting device are operated to detect a push-pull and second light receiving area of the beam splitting device is operated to detect a focus error signal. Did applicant intend to state, "said beam splitting device has two first light directing areas for directing light to the light receiving device to detect a push-pull signal and a second light directing area for directing light to the light receiving device to detect a focus error signal, and a configuration is provided such that the center of the optical axis of the reflected light in said beam splitting device is made to lie within said second light directing area for directing the light to the light receiving device to detect the focus error signal"?

In Claim 2, the phrase "said three light receiving areas" has no antecedent basis in the claims. Applicant is suggested to change the claim to read, "three light directing areas comprise..."

In Claim 3, the phrase "said three light receiving areas" has no antecedent basis in the claims. Applicant is suggested to change the claim to read, "three light directing areas comprise..."

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In Claim 4, the phrase "said second light area" in lines 8-10 has no antecedent basis in the claims. Applicant is suggest to change the claim to read "said second light directing area..."

In Claim 5, it is unclear how the two first light receiving areas of the beam splitting device are operated to detect a push-pull, a second light receiving area of the beam splitting device is operated to detect a focus error signal, and a fourth light receiving area including the optical axis of the reflected light, in lines 11-15. Did applicant intend to state, "said beam splitting device has two first light directing areas for directing light to the light receiving device to detect a push-pull signal, a second light directing area for directing light to the light receiving device to detect a focus error signal, and a fourth light directing area including the optical axis of the reflected light"?

In Claim 10, it is unclear how the two first light receiving areas of the beam splitting device are operated to detect a push-pull signal and a second light receiving area of the beam splitting device is operated to detect a focus error signal, and the amount of the push-pull signal detected in said two first light receiving areas for detecting the push-pull signal is more than 50 % of the total amount of the push-pull signal obtained from said optical disk. Did applicant intend to state, "said beam splitting device has two first light directing areas for directing light to the light receiving device to detect a push-pull signal and a second light directing area for directing light to the light receiving device to detect a focus error signal, and the amount of light used to detect the push-pull signal received in said two first light directing areas is more than 50 % of

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the total amount of the light used to detect the push-pull signal returned from said optical disk”?

In Claim 11, the phrase “said three light receiving areas” has no antecedent basis in the claims. Applicant is suggested to change the claim to read, “three light directing areas comprise...”

In Claim 12, the phrase “said three light receiving areas” has no antecedent basis in the claims. Applicant is suggested to change the claim to read, “three light directing areas comprise...”

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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Claims 1, 2, 5-9 rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al., US Patent No. 6,850,472 (hereafter "Miyazaki"), in view of Satoh et al., US Patent No. 5,428,497 (hereafter "Satoh").

Regarding Claim 1, Miyazaki discloses an optical pickup apparatus (Fig. 1, "optical pickup device") for reproducing information from an optical disk ("disk 8"), comprising: a semiconductor laser ("semiconductor laser source 1") applying a beam to the optical through an objective lens ("objective lens 5"); and a light receiving device ("photodetector 9") to which light reflected from the optical disk is directed through said objective lens and a beam splitting device ("hologram element 7"), wherein: said beam splitting device has two first light receiving areas for detecting a push-pull signal (Fig. 2, regions 7c and 7d; see also Col. 7, lines 30-38, where the limitation "for detecting a push-pull signal" is met by lines 34-38) and a second light receiving area for detecting a focus error signal (region 7a; see also Col. 8, lines 12-20), and a configuration is provided such that the center of the optical axis of the reflected light in said beam splitting device is made to lie within said second light receiving area for detecting the focus error signal (see Col. 7, lines 43-46 in addition to Col. 8, lines 12-20, where the limitation "the center of the optical axis of the reflected light in said beam splitting device is made to lie within said second light receiving area" is met in that because the laser beam P passes only through region 7a, the center of its optical axis therefore must lie within 7a).

Miyazaki does not disclose that the optical disk has two recording layers.

Satoh discloses a recording medium having two recording layers (see Abstract, in addition to Fig 3, and Col. 3, lines 41-48). Satoh teaches the manufacture and use of such a disk due to the increased memory capacity and data storage (Col 1, lines 17-19). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the optical disk of Satoh with the optical pickup device of Miyazaki, the motivation being to increase memory capacity and data storage.

Regarding Claim 2, Miyazaki discloses the optical pickup apparatus as claimed in claim 1, wherein: lines defining said three light receiving areas comprise three straight lines and a curved line (Fig. 2, lines 7e, 7f, and 7g, where 7e is intersected by 7f at its midpoint to create sections 7c and 7d, thus 7e comprises 2 straight lines).

Regarding Claim 5, Miyazaki discloses an optical pickup apparatus (Fig. 1, "optical pickup device") for reproducing information from an optical disk ("disk 8"), comprising: a semiconductor laser ("semiconductor laser source 1") applying a beam to the optical through an objective lens ("objective lens 5"); and a light receiving device ("photodetector 9") to which light reflected from the optical disk is directed through said objective lens and a beam splitting device ("hologram element 7"), wherein: said beam splitting device has two first light receiving areas for detecting a push-pull signal (Fig. 2, regions 7c and 7d; see also Col. 7, lines 30-38, where the limitation "for detecting a



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push-pull signal" is met by lines 34-38) and a second light receiving area for detecting a focus error signal (region 7a; see also Col. 8, lines 12-20), and a third light receiving area including the optical axis of the reflected light (region 7b).

Regarding Claim 6, Miyazaki discloses the optical pickup apparatus as claimed in claim 1, wherein: said beam-splitting device comprises a hologram device ("hologram element 7").

Regarding Claim 7, Miyazaki discloses the optical pickup apparatus as claimed in claim 5, wherein: said beam-splitting device comprises a hologram device ("hologram element 7").

Regarding Claim 8, Miyazaki discloses an optical disk drive apparatus (inherent apparatus that holds the optical pickup device of Figure 1) comprising the optical pickup apparatus claimed in claim 1.

Regarding Claim 9, Miyazaki discloses an optical disk drive apparatus (inherent apparatus that holds the optical pickup device of Figure 1) comprising the optical pickup apparatus claimed in claim 5.

***Response to Arguments***

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7. Applicant's arguments, see pages 9 and 10 of Applicant's Amendment in Response to Non-Final Office Action, filed May 2, 2007, with respect to the rejection(s) of claim(s) 1, 2, 6 and 8 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Miyazaki et al., US Patent No. 6,850,472, in view of Satoh et al., US Patent No. 5,428,497.

***Allowable Subject Matter***

8. Claims 3 and 4 would be allowable if rewritten to overcome the objection(s) under 37 § CRF 1.75(a), set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

9. Claims 10-14 would be allowable if rewritten or amended to overcome the objection(s) under 37 § CRF 1.75(a) set forth in this Office action.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanessa (Brandi) Coleman whose telephone number is (571) 272-9081. The examiner can normally be reached on Mon-Thurs 8:30-6; 1st Fri off, 2nd Fri 8:30-5.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vanessa (Brandi) Coleman  
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VC

  
THANG V. TRAN  
PRIMARY EXAMINER